

## **R E M A R K S**

The final office action of June 26, 2006 has been reviewed and its contents carefully noted. Reconsideration of this case, as amended, is requested. Claims 1 through 4, 6 through 10, and 12 remain in this case.

The numbered paragraph below corresponds to the numbered paragraph in the Office Action.

The Applicant thanks the Examiner, James Pilkington, for his voicemail message of October 18, 2006 stating that he would call the Applicant's agent to have an interview prior to sending out an office action, if he deemed the claims not patentable after reviewing an RCE. The Applicant respectfully requests that the Examiner contact the Applicant's agent to schedule an interview.

### **Rejection under 35 U.S.C. §103**

2. Claims 1-4, 6-10, and 12 were rejected under 35 U.S.C. 103(a) as being unpatentable over Gröger *et al.* (U.S. Patent No. 4,832,664) in view of Kato (U.S. Patent No. 6,296,432). Applicant respectfully disagrees with the rejection.

The basic considerations which apply to obviousness rejections under MPEP Section 2141 are:

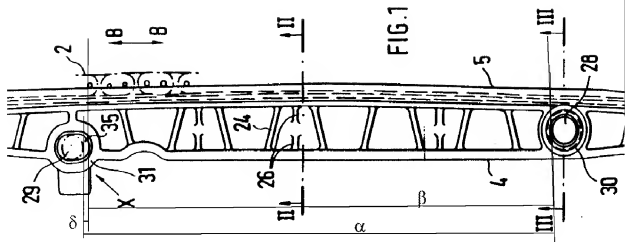
- (1) the claimed invention must be considered as a whole;
- (2) the references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
- (3) the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
- (4) reasonable expectation of success is the standard by which obviousness is determined.

Independent claim 1 claims, in part, "a plurality of bolts each comprising ... a bolt shaft ... wherein the bolt is mountable in the bolt holes, and wherein nearest edges of the bolt shafts of each pair of bolts, when mounted, are spaced apart by a first distance" and "a chain guide having

at least two bolt slots for receiving the bolts ... nearest edges of each pair of bolt slots of the chain guide, when mounted, being spaced apart by a second distance, wherein at an operating temperature for at least one pair of bolt shafts and their respective pair of bolt slots the first distance is equal to or smaller than the second distance such that the bolt shafts contact the nearest edges of the bolt slots".

The Examiner states that in Fig. 1 of Gröger for the "pair of pin shafts (28,29) and ... pair of slots (30,31) the first distance is 'equal to or slightly smaller' than the second distance such that the pin shafts (28,29) contact the nearest edges of the slots (30,31) (Fig 1)" [present office action, dated 6/26/06, page 2, lines 21-23]. The Examiner also states "although Gröger's figures do not explicitly disclose the distances being equal or less than one another Gröger does suggest that the pins are capable of coming in contact with the edge of the slot which would make the two distances equal. Gröger discloses in C3/L17-20 that the slotted bore is provided to compensate for thermal expansion of the guide rail. Upon thermal expansion of the guide rail the pin is capable of contacting the nearest edge of the slot and therefore making the two distances equal to each other" [present office action, dated 6/26/06, page 4, lines 5-11].

Gröger teaches a guide rail consisting of a plastic material with a slideaway lining body and a carrier. In Fig. 1, Gröger indicates bearing pin (29) as a dotted/dashed circle inside a clearly larger oval-shaped bore (35) in a bearing lug (31). The bearing pin (29) is shown approximately in the center of the slot (31). The bearing pin (29) does not appear to contact any edge of the slot (31) and clearly does not contact the edge of the slot nearest to the other slot (30). There is a large gap between the edge of the bearing pin (29) and the slot (31) in Fig. 1. Therefore, the distance between the nearest edges of the bearing pins (28), (29) in Fig. 1 of Gröger must be greater than the distance between the nearest edges of the slots (30), (31). In the figure below, which shows the relevant parts of Fig. 1 of Gröger, the equivalent to Applicant's first distance (nearest edges of pin shafts) is labeled as  $\alpha$ , and the equivalent to Applicant's second distance (nearest edges of slots) is labeled as  $\beta$ . The difference between these two distances is labeled as  $\delta$  below. In the prior art Fig. 1, the first distance is clearly greater than the second distance by the measureable amount  $\delta$ . Fig. 1 does not show a first distance equal to or smaller than a second distance. The Applicant respectfully stresses that nearest edge distances are the distances being compared in claim 1 and not center-to-center distances.



Gröger describes the mounting arrangement of the bracket in column 3, lines 13-32. Specifically, Gröger teaches that the "bearing lug 31 is provided with a type of slotted bore 35, whereby thermal expansions of the guide rail 1, specifically between bearing pins 28, 29 are compensated" [Gröger, column 3, lines 17-20]. Slotted bores are known in the art to compensate for thermal expansion in plastic chain guides (see page 3, lines 19-31 and Figs. 1 and 2A of the present application as filed). Gröger does not teach or suggest that the pin (29) is capable of contacting the nearest edge of the lug upon thermal expansion of the guide rail, nor does Gröger teach or suggest that the pins (28,29) are capable of simultaneously coming into contact with the nearest edges of the lugs. The degree of thermal expansion of the bracket is limited and dependent on temperature and the type of polymer used, such that it is not possible to assume that at some elevated temperature the bracket will expand such that the pins contact the nearest edges based solely on Fig. 1 and absent any teaching in the specification of Gröger. Gröger does teach that the bracket is preferably polyamide with fiber glass additions [Gröger, col. 2, lines 32-37] but does not teach or suggest that the bracket thermally expands such that the pins contact the nearest edges.

In contrast, Gröger's bore is slotted so that the pin (29) does not contact the lug after thermal expansion of the bracket. In support of this, in the detailed views of the slotted bore in Figs. 4 and 5, Gröger teaches a fixing device for holding the bracket in place axially on the pin. In Fig. 4, a spherical segment on the end of a bolt inserts into a groove in the pin (29) to prevent axial movement of the bracket with respect to the pin (i.e. to prevent the bracket from sliding off

the pins). In Fig. 5, two tightening elements are turned inward to insert into the groove in the pin. In both embodiments, the fixing device is mounted to the bracket and contacts the pin from the side to prevent axial movement. Since the fixing device in Fig. 4 is mounted to the bracket, if thermal expansion did cause the nearest edge of the lug to contact the pin, the fixing device would move with the lug such that the fixing device would disengage the groove during expansion before nearest edge contact was achieved. Therefore, this embodiment is clearly not designed for such a degree of thermal expansion to occur. Since the pin is not shown in Fig. 5, it is difficult to speculate what would happen to the pin with respect to the fixing device upon thermal expansion in this embodiment. Neither the figures nor the description in Gröger teach or suggest a thermal expansion such that at an operating temperature for at least one pair of bolt shafts and their respective pair of bolt slots the first distance is equal to or smaller than the second distance such that the bolt shafts contact the nearest edges of the bolt slots.

Kato does not provide what Gröger lacks. Kato teaches a bolt guided by an engaging spiral guide groove to prevent encroaching, seizure, and racing between the bolt and its nut. Kato does not teach or suggest a chain guide having slots or a mounting surface for mounting bolts. Kato does not teach or suggest at an operating temperature for at least one pair of bolt shafts and their respective pair of bolt slots the first distance is equal to or smaller than the second distance such that the bolt shafts contact the nearest edges of the bolt slots.

Neither Gröger nor Kato, alone or in combination, teach or suggest the Applicant's independent claim 1. Therefore, it is respectfully suggested that the rejection of independent claim 1 as being obvious over Gröger in view of Kato is overcome. Dependent claims 2-4 and 6, being dependent upon and further limiting independent claim 1, should also be allowable for that reason, as well as for the additional recitations they contain. Reconsideration and withdrawal of the rejection are respectfully requested.

Independent claim 7 claims, in part, "at least two bolt holes spaced apart by a first distance between nearest edges of the bolt holes ...and a chain guide having a bolt slot corresponding to each bolt hole and spaced apart by a second distance between nearest edges of the bolt slots ... wherein at an operating temperature the first distance is equal to or smaller than the second distance such that the bolts contact the nearest edges of the bolt slots".

The Examiner states that in Fig. 1 of Gröger for the "pair of pin shafts (28,29) and ... pair of slots (30,31) the first distance is 'equal to or slightly smaller' than the second distance such that the pin shafts (28,29) contact the nearest edges of the slots (30,31) (Fig 1)" [present office action, dated 6/26/06, page 2, lines 21-23]. The Examiner also states "although Gröger's figures do not explicitly disclose the distances being equal or less than one another Gröger does suggest that the pins are capable of coming in contact with the edge of the slot which would make the two distances equal. Gröger discloses in C3/L17-20 that the slotted bore is provided to compensate for thermal expansion of the guide rail. Upon thermal expansion of the guide rail the pin is capable of contacting the nearest edge of the slot and therefore making the two distances equal to each other" [present office action, dated 6/26/06, page 4, lines 5-11].

Gröger teaches a guide rail consisting of a plastic material with a slideaway lining body and a carrier. In Fig. 1, Gröger indicates bearing pin (29) as a dotted/dashed circle inside a clearly larger oval-shaped bore (35) in a bearing lug (31). The bearing pin (29) is shown approximately in the center of the slot (31). The bearing pin (29) does not appear to contact any edge of the slot (31) and clearly does not contact the edge of the slot nearest to the other slot (30). There is a large gap between the edge of the bearing pin (29) and the slot (31) in Fig. 1. Therefore, the distance between the nearest edges of the bearing pins (28), (29) in Fig. 1 of Gröger must be greater than the distance between the nearest edges of the slots (30), (31). In the figure above, which shows the relevant parts of Fig. 1 of Gröger, the equivalent to Applicant's first distance (nearest edges of pin shafts) is labeled as  $\alpha$ , and the equivalent to Applicant's second distance (nearest edges of slots) is labeled as  $\beta$ . The difference between these two distances is labeled as  $\delta$  below. In the prior art Fig. 1, the first distance is clearly greater than the second distance by the measureable amount  $\delta$ . Fig. 1 does not show a first distance equal to or smaller than a second distance. The Applicant respectfully stresses that nearest edge distances are the distances being compared in claim 7 and not center-to-center distances.

Gröger describes the mounting arrangement of the bracket in column 3, lines 13-32. Specifically, Gröger teaches that the "bearing lug 31 is provided with a type of slotted bore 35, whereby thermal expansions of the guide rail 1, specifically between bearing pins 28, 29 are compensated" [Gröger, column 3, lines 17-20]. Slotted bores are known in the art to compensate for thermal expansion in plastic chain guides (see page 3, lines 19-31 and Figs. 1 and 2A of the

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Kato does not teach or suggest at an operating temperature a first distance is equal to or smaller than a second distance such that the bolts contact the nearest edges of the bolt slots.

Neither Gröger nor Kato, alone or in combination, teach or suggest the Applicant's independent claim 7. Therefore, it is respectfully suggested that the rejection of independent claim 7 as being obvious over Gröger in view of Kato is overcome. Dependent claims 8-10 and 12, being dependent upon and further limiting independent claim 7, should also be allowable for that reason, as well as for the additional recitations they contain. Reconsideration and withdrawal of the rejection are respectfully requested.

### **Conclusion**

Applicant believes the claims, as amended, are patentable over the prior art, and that this case is now in condition for allowance of all claims therein. Such action is thus respectfully requested. If the Examiner disagrees, or believes for any other reason that direct contact with Applicants' attorney would advance the prosecution of the case to finality, he is invited to telephone the undersigned at the number given below.

"Recognizing that Internet communications are not secured, I hereby authorize the PTO to communicate with me concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file."

Respectfully Submitted:  
--Andrew C. Shum--

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